

## FLEXIBLE OPTICAL WAVEGUIDES FOR BACKPLANE OPTICAL INTERCONNECTIONS

### ABSTRACT OF THE DISCLOSURE

A flexible optical connector suitable for use in an optical backplane for interconnecting optical circuit boards, and methods of making the optical connector, are disclosed. The flexible optical connector comprises a plurality of waveguides on two or more levels providing a plurality of light paths that allow light communication between optical circuit boards. The optical connector can be manufactured separately from the backplane and thereafter mounted on the backplane. The backplane of the present invention may also have a mounting structure for removably retaining and positioning optical circuit board and may, optionally, include electrical traces for providing electrical interconnections between the circuit boards.